Notice of Allowability	Application No.	Applicant(s)	
	09/718,378	KUSUMOTO, YUICHI	
	Examiner	Art Unit	
	Dmitry Levitan	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *12/16/04*.

2. ☒ The allowed claim(s) is/are *Claims 1-3, 5, 8, 9, 12-16, 18-20 and 23-28 , renumbered as 1-3,5-7,9,4,8,10-13,15-19,14,20*.

3. ☒ The drawings filed on *24 November 2000* are accepted by the Examiner.

4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Amendment, filed 12/16/04 has been entered. Claims 1-3, 5, 8, 9, 12-16, 18-20 and 23-28 remain pending.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Paul Harrity on 03/31/05.

The application has been amended as follows:

Claims 1-3, 5, 8, 9, 12-16, 18-20 and 23-28 have been replaced with the claims of the Appendix A.

Note. The claims were amended for clarity.

Allowable Subject Matter

2. Claims 1-3, 5, 8, 9, 12-16, 18-20 and 23-28 are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should be preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance"

Conclusion

The claims being allowed, **Prosecution On The Merits Is Closed** in this application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Levitan whose telephone number is 571-272-3093. The examiner can normally be reached on 8:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

Dmitry Levitan
Patent Examiner.
04/01/05

HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

Appendix A

1. (Currently Amended) A cell disposal avoidance system in a buffer, said buffer including category buffers classified by category in an ATM switch, said category buffers each for storing a cell, said buffer reading out said cell, said system comprising:

a weight representing [[the]] a priority that determines the reading rate for each of said category buffers;

a reader for laying out allocation in a time division mode according to said priority [[mode]], said allocation being read out of each of said category buffers when a cell in a buffer is read out, and reading out said allocation in a round-robin format;

a detector for detecting cell disposal of said buffer;

a controller for changing to a higher weight a weight of the priority [[mode]] in a buffer in a cell disposal state detected by said detector;

an informer for informing [[said]] a maintenance terminal of the fact that said buffer in a cell disposal state has stopped its cell disposal; and

a first resetting unit for resetting a weight representing the priority [[mode]] of said buffer in [[a]] the cell disposal state by commands input by said [[informer]] maintenance terminal.

2. (Currently Amended) The cell disposal avoidance system defined in Claim 1, further comprising a second resetting unit for resetting a weight representing the priority [[mode]] of the buffer when the cell disposal of said buffer stopped.

3. (Currently Amended) The cell disposal avoidance system in Claim 1, wherein the higher weight of the priority [[mode]] and an initial priority [[mode]] are informed to [[a]] the maintenance terminal.

4. (Cancelled)

5. (Currently Amended) A cell disposal avoidance system in a buffer, said buffer including category buffers classified by category in an ATM switch, said category buffers each for storing a cell, said buffer reading out said cell, said system comprising:

a priority mode representing a reading rate weight assigned to each of said category buffers;

a reader for laying out allocation in a time division mode according to [[said]] a priority [[mode]], said allocation being read out of each of said category buffers when a cell in a buffer is read out, and reading out said allocation in a round-robin format;

a detector for detecting the fact that the capacity of said buffer exceeds a first threshold; and

a first controller for changing to a higher value the reading rate weight of a priority [[mode]] of a buffer when the detector detects that the first threshold has been exceeded; and

when the capacity of a buffer exceeding said first threshold reaches a second threshold, lower than said first threshold, a first resetting unit resets a weight representing the priority [[mode]] of said buffer.

6. – 7. (Cancelled)

8. (Currently Amended) The cell disposal avoidance system defined in Claim 5, further comprising, when the capacity of a buffer reaches a third threshold [[value being]] less than said

second threshold, a second controller sets the priority [[mode]] of said buffer to a weight lower than that of said first controller.

9. (Currently Amended) The cell disposal avoidance system defined in Claim 5, wherein the higher value of the weight of the priority [[mode]] changed by said first controller and an initial priority [[mode]] are informed to a maintenance terminal.

10. – 11. (Cancelled)

12. (Currently Amended) A cell disposal avoidance system in a buffer, said buffer including category buffers classified by category in an ATM switch, said category buffers each for storing a cell, said buffer reading out said cell, said system comprising:

a priority mode representing a reading rate weight assigned to each of said category buffers;

a reader for laying out allocation in a time division mode according to [[said]] a priority [[mode]], said allocation being read out of each of said category buffers when a cell in a buffer is read out, and reading out said allocation in a round-robin format;

a detector for detecting the fact that the capacity of said buffer exceeds a first threshold;

a first controller for changing to a higher value the reading rate weight of a priority [[mode]] of a buffer when the detector detects that the first threshold has been exceeded; [[and]]

an informer for informing a maintenance terminal of the fact that the capacity of said buffer exceeding said first threshold reaches [[said]] a second threshold; and

a resetting unit for resetting the reading rate weight to a weight representing the priority [[mode]] of a buffer exceeding said first threshold, by a command input by said [[informer]] maintenance terminal.

13. (Previously Presented) The cell disposal avoidance system defined in Claim 1, wherein said category represents the type of QoS class in accordance with a header within said cell and a cell path.

14. (Previously Presented) The cell disposal avoidance system defined in Claim 5, wherein said category represents the type of QoS class in accordance with a header within said cell and a cell path.

15. (Currently Amended) A cell disposal avoidance method suitable in a buffer, said buffer including category buffers classified by category in an ATM switch, said category buffers for each for storing cells, said buffer reading out said [[cell]] cells, said method comprising [[the steps of]]:

[[setting to a higher level]] increasing a cell reading priority of a buffer in which cell disposal occurs due to congestion of said buffer;

changing a period during which cells are read from a buffer in a cell disposal state, in accordance with the [[higher level of]] increased cell reading priority and a priority allocated to each of said category buffers, to speed the reading rate of said congested buffer; and

when cell disposal occurs in a category buffer, informing a maintenance terminal of said [[higher level of]] increased cell reading priority and [[a priority with]] an initial value for the cell reading priority.

16. (Currently Amended) The cell disposal avoidance method defined in Claim 15, further comprising [[the steps, of]]:

when said buffer in which cell disposal occurs stops cell disposal, resetting the cell reading priority of said buffer to [[an]] the initial value; and

resetting a period during which a cell is read out of each of said category buffers to an initial state, according to [[a]] the priority allocated to each of said category buffers.

17. (Cancelled)

18. (Currently Amended) The cell disposal avoidance method defined in Claim 15, further comprising [[the step of,]] when a buffer in a cell disposal [[occurrence]] state stops its cell disposal, informing said maintenance terminal of a cease of the cell disposal.

19. (Currently Amended) A cell disposal avoidance method suitable in a buffer, said buffer including category buffers classified by category in an ATM switch, said category buffers each for storing cells, said buffer reading out said [[cell]] cells, said method comprising [[the steps of]]:

[[setting to a higher level]] increasing a cell reading priority of a buffer in which cell disposal occurs due to congestion of said buffer;

changing a period during which cells are read from a buffer in a cell disposal state, in accordance with the [[higher level of]] increased cell reading priority and a priority allocated to each of said category buffers, to speed the reading rate of said congested buffer;

when a maintenance terminal inputs a command for resetting the cell reading priority to an initial value after said maintenance terminal has received information on a cease of cell disposal, resetting to an initial value a cell reading priority of said buffer in a cell disposal halt state; and

resetting a period during which a cell is read out of each of said category buffers, to an initial state, in accordance with a priority allocated to each of said category buffers.

20. (Currently Amended) A cell disposal avoidance method suitable for a buffer, said buffer including category buffers classified by category in an ATM switch, said category buffers each for storing a cell, said buffer reading out said cell, said method comprising [[the steps of]]:

when the capacity of said buffer exceeds a first threshold, [[setting to a higher level]] increasing a cell reading priority of said buffer;

changing a period during which a cell is read out of a buffer exceeding said first threshold, in accordance with a priority allocated to each of said category buffers, to speed a reading speed of said buffer in a cell disposal state;

when it is detected that the capacity of the buffer exceeding said first threshold reaches a second threshold, lower than said first threshold, resetting the cell reading priority of said buffer to an initial value; and

resetting a period during which a cell is read out of each of said category buffers, to an original state, in accordance with a priority allocated to each of said category buffers.

21. – 22. (Cancelled).

23. (Currently Amended) The cell disposal avoidance [[system]] method defined in Claim 20, further comprising [[the step of,]] when the capacity of a buffer reaches a third threshold [[being]] lower than said second threshold, [[sets]] setting a priority [[mode]] of said buffer to a threshold lower than a value set when the capacity of said buffer exceeds said first threshold.

24. (Currently Amended) A cell disposal avoidance method suitable for a buffer, said buffer including category buffers classified by category in an ATM switch, said category buffers each for storing a cell, said buffer reading out said cell, said method comprising [[the steps of]]:

when the capacity of said buffer exceeds a first threshold, [[setting to a higher level]] increasing a cell reading priority of said buffer;

changing a period during which a cell is read out of a buffer exceeding said first threshold, in accordance with a priority allocated to each of said category buffers, to speed a reading speed of said buffer in a cell disposal state; and

when a category buffer exceeds said first threshold, informing a maintenance terminal of the [[higher level]] increased cell reading priority and [[a priority of]] an initial value of the cell reading priority.

25. (Currently Amended) The cell disposal avoidance [[system]] method defined in Claim 20, further comprising [[the step of,]] when a buffer exceeding said first threshold stops

exceeding a second threshold, lower than said first threshold, informing a maintenance terminal of the fact that said buffer has ceased cell disposal.

26. (Currently Amended) The cell disposal avoidance [[system]] method defined in Claim 25, further comprising [[the steps of]]:

when said maintenance terminal inputs a command for resetting the cell reading priority to an initial value after said maintenance terminal has received information on a cease of exceeding said second threshold, lower than said first threshold [[to an initial value]]; and

resetting a period during which a cell is read out of each of said category buffers, to an original value, in accordance with a priority of each of said category buffers.

27. (Currently Amended) The cell disposal avoidance [[system]] method defined in Claim 15, wherein said category represents the type of QoS class in accordance with a header within said cell and a cell path.

28. (Currently Amended) The cell disposal avoidance [[system]] method defined in Claim 20, wherein said category represents the type of QoS class in accordance with a header within said cell and a cell path.